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A SECOND SPECIES OF THE MILLIPED GENUS *TRIGENOTYLA* (CHORDEUMIDEA: CONOTYLIDAE: TRICHOPETALINAE: SCOTERPINI)

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The segmentation of the basal region of the posterior gonopod offers a convenient basis for dividing the family Conotylidae into natural groups. The trend in the evolution of this gonopod from a 7-segmented walking leg is toward a structure composed of only two thickened, elongated segments. This has been brought about by the fusion of the three basal segments and by the degeneration of the three distal segments or by fusion of part of them with the fourth segment, the femur.

The North American subfamilies of the Conotylidae are the Conotylinae, in which the basal segment of the posterior gonopod is a short coxa with a gland opening and conspicuous processes; and the Trichopetaline, in which the basal segment is an elongated coxoprefemur. In the tribe Trichopetalini a small, rounded coxal lobe and the opening of the coxal gland are on the mesial surface of the coxoprefemur. In the tribe Scoterpini two membranous pieces extend from the base of the coxoprefemur across the sternum to the opposite coxoprefemur; the anterior extension is a continuous band and the posterior one is a coxal lobe that is contiguous with its mate in the midline; the opening of the coxal gland is at the apex of the coxal lobe. The two genera included in the Scoterpini, *Scoterpes* and *Trigenotyla*, resemble the Trichopetalini in the long segmental setae, the small body, the absence or almost complete absence of body pigment, and in the structure of the anterior gonopods.

The resttelopodite (This name was used by Verhoeff for the region of the gonopod beyond the coxoprefemur.) consits of one elongated segment in the epigean genus *Trigenotyla*, while in the troglodytic genus *Scoterpes* it consists of one elongated segment, which is the femur, and two or three degenerate terminal segments. The presence of segments beyond the femur is a primitive character that is found in the family Conotylidae only in the genus *Scoterpes*. Natural selection

within caves has favored the retention of the terminal segments, while they were lost in epigean forms. In the tribe Trichopetalini, the resttelopodite consists of only one segment in all known members, including the troglodytic genus *Zygonopus*. This suggests that *Zygonopus* became a troglodyte after the reduction of the posterior gonopod to two segments had occurred.

Genus *Trigenotyla*

Trigenotyla Causey, 1951, Proc. Biol. Soc. Washington, vol 64, p. 118.

Generotype: *T. parca* Causey 1951. Other species: *T. vaga*, n. sp. *Craspedosoma flavidum* Bollman 1888 may be congeneric with these species.

Range: *Trigenotyla parca* has been collected in Carroll, Washington, and Madison Counties, Arkansas, and *T. vaga* in Latimer County, Oklahoma.

Body 6 to 7 mm. long, weakly pigmented; no promentum; ocelli in about three irregular rows that form a triangular patch; antennae clavate, about as long as the width of the body; paranota small, the anterior angle rounded; length of segmental satae about four-tenths the body width, set in a very slightly curved oblique row on most segments, the distance between the two internal setae of a segment usually more than three times the distance between the external and internal setae; segmental setae shorter, finer, and more widely separated across the dorsum than in *Scoterpes*; sixth leg-pair with segments 3 and 4 slightly thickened and bowed. Anterior gonopod with a medial group of three setae and a lateral group of several setae; the elongated coxite is deeply bifid; the pseudoflagellum is either plumose or membranous. The posterior gonopod is composed of two segments; the basal segment is prolonged ventrad beyond its articulation with the smaller second segment; the coxal lobe extends mesiad from the base of the coxoprefemur to the middle of the sternum, and a continuous membranous band connects the two prefemurs.

Key to the Species of *Trigenotyla*, Based on the Male

Both branches of the coxite of the anterior gonopod are narrow; one margin of the anterior branch is irregularly toothed. Pseudoflagellum plumose ..... *parca*

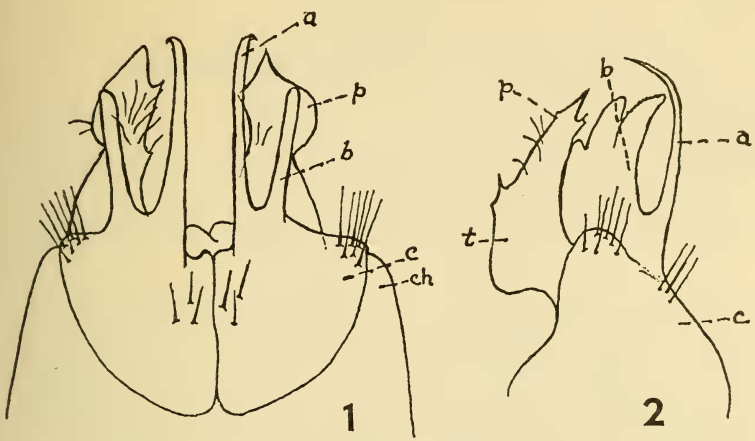
Anterior branch of the coxite of the anterior gonopod is narrowly elongated and both margins are even; the posterior branch is broadly lamellar and divided into three short lobes at the apex. Pseudoflagellum broad and membranous ..... *vaga*, n. sp.

Trigenotyla vaga, new species

Figures 1 and 2

Diagnosis: Distinguished from *T. parca* by the anterior gonopod, which has the anterior branch of the coxite narrowly attenuated and the posterior branch broadly lamellar.

Type locality: A river ravine, Latimer County, Oklahama, 1 ♂, Dec. 9, 1933, collected by J. R. Carpenter.



Explanation of Figures

Trigenotyla vaga, new species, male holotype. Figure 1. Anterior gonopods, anterior view. Figure 2. Left anterior gonopod, lateral view. a-anterior branch of coxite; b-posterior branch of coxite; c-coxa; ch-cheirite; p-pseudoflagellum; t-telopodite.

Type material: Male holotype in American Museum of Natural History.

Range: Known only from the type locality.

Description of male holotype: Length about 6.5 mm., greatest width 1 mm. Color amber, possibly modified by having been dry. Ocelli in a triangular area on a brown background, in irregular rows of 7, 5 (4), 2. Paranota and arrangement of setae as in *T. parca.* Tarsi of legpairs 3, 4, and 5 with a row of setae with minute bladders at the apex. Sixth legpair with segments 3 and 4 slightly thickened and bowed. No lobes observed on seventh legpair. Coxae of legpairs 10 and 11 with the usual coxal gland openings.

Anterior gonopod (Figures 1 and 2) with the coxite deeply bifid, the anterior branch elongated, evenly attenuated, and bent caudad; and the posterior branch large, lamellar, with three stout teeth at the apex. Coxal setae straight, a group of three near the median line and another group of six near the ventral margin. Telopodite much narrower and shorter than the coxa; its pseudoflagellum is as large as the posterior branch of the coxite and in the form of an irregular membrane on which a few fibrillae can be seen. Cheirite narrowed, its apex not reaching to the ventral margin of the coxa.

Posterior gonopod as in *T. parca.*